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EDITORIAL COMMENT

Our efforts to save CN80 readers money by organizing the Computer News Purchasing Club is being well accepted by our readers. Members have already saved several times their membership fee on their very first purchase. Granted the CN Purchasing Club is for purchasing IBM Compatible Computers and MS-DOS software but the club really benefits those who have both IBM and TRS-80 computers or for those who are just starting out in the MS-DOS world.

Needless to say, there is no machine like our faithful TRS-80 Model I, III and 4s. Especially the Model 4 with all its ease of operation and the simplicity it has to run some very sophisticated programs.

We have revamped some of our advertising pages to make more room for text space. As you know CN80 relies heavily on the sale of programs and hardware to survive. If it wasn't for our product sales, the CN80 might just become a small newsletter, compared to the size of the monthly magazine that it is. Your support is greatly appreciated, and we need it to stay alive. But we do not expect your support unless we earn it.

New programs keep popping up from time to time that makes the TRS-80 Model 4s even more useful. One such program is being announced in this issue. It is *Magic Lantern* by Richard G. Snow. More about it follows in an accompanying separate article. Also because it was just received there will be more reviews about the program in future issues - by its users we hope. Try the program and write a review for it and you will receive 25 MacPaint disks of your choice if your review is judged to be the best. All other reviews that are printed will receive 10 free MacPaint disks as runners up.

By the way the MacPaint Library from the file cabinet has 155 Disks loaded with high-resolution art, and 110 MacPaint Nude Disks. Each disk has

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an average of 11 files per disk. And that works out to about 2,915 MAC high resolution files. Not counting the 1,000 or more files in the /HR High Resolution Library.

With all these files you should have more than enough pictures to embellish your printouts.

If you do not have a high resolution board, the Micro-Labs High Resolution board has been reduced in price to $66 and according to Ted Carter who says he has parts for about 30 more boards, when those are gone there will be no more.

If you have a program that you have written that you feel is of commercial value, or would like to simply share it with your fellow readers send it in. New programs, new ideas about old programs, or just simple how-to-do-it advice is always welcome. It not only aids those who are just beginners, but it also is enlightening to those who have used the computers for a long time.

So do your part - get your ideas in the mail. Articles on a disk in ASCII - please.

For those of you who are wondering what happened to the Visit With David Goben column last month and this month. David has been on a much deserved vacation and has started a new job which has monopolized all of his free time. We hope to see him back in the August issue - if we can tear him away from the summer beach and the Atlantic sea breezes long enough.

RECYCLE-A-COMPUTER

A THANK-YOU AND AN UPDATE

by Rita Laws

The response from the CN-80 readers and editors has been generous. Even though our Recycle-A-Computer program is not taking any more donations for now, I had to write to thank everyone who has helped make our small program a success. The Recycle-A-Computer program of the Oklahoma Chapter of AASK (Adopt A Special Kid) America has given eight computers in eight months to the same number of families. The computers, peripherals, books and software are provided free of charge to local families who have adopted at least one child with special needs.

IT'S WORKING!

Several of the eight computers have been from the TRS-80 family including a Model III and a Mod4P. We were also able to supply extras like a TRS-80 printer, modems, books, manuals, and lots of original software and public domain programs. The Mod3 went to a large family with five adopted children. The Mod4 is providing a special kind of companionship to an only child. In all cases, the families were thrilled to receive the recycled systems.

My husband, Amado, and I have learned a lot these last months. For example, we have learned that it is difficult to find volunteers to work on certain types of computers. Our bedroom is crowded with half a dozen non-functioning Commodore computers that I can't find volunteers for. People who can fix IBM and Apples abound, but not so for the Commodore. Our little program requires patience. One volunteer has kept a broken Mac for months because he doesn't have time to fix it. I have several families who would love to have that system. But how can you rush a volunteer?

We've been impressed with the kindness of volunteers and donors. One man spent $51.00 to ship his donation from Indiana. We've also received boxes from Florida, Texas, Massachusetts, Wyoming, Colorado, and a few other states. Donations have ranged from a floppy disk to a complete system with printer. The letters that accompany the boxes are full of encouragement and invaluable information on running the donated computer.

When we need a certain part, we rarely have trouble finding it. I just go online and ask around. For example, a Co-Co computer was donated in excellent condition. However, it arrived with only one game cartridge. I found a Co-Co club online and left a few notes. Within a week, several game cartridges had arrived by mail. Today, a family is using this system to help their son who was born with Down's Syndrome. In another case, we received a 286 computer that was missing a lot of internal parts. The same week, we received a box of XT components that were left over after the donor upgraded. A clever volunteer used the XT parts to get the 286 running. The child receiving the computer didn't care that it was an XT/286 hybrid. He was simply glad to have a functioning computer. Computer people care about kids, and they despise the idea of a good computer gathering dust.

We've had fun while we learn about older computers. Our children copy their favorite shareware disks to include with outgoing systems.

Amado cleans the working computers inside and out, and makes minor hardware repairs. I study the manuals so that the child receiving the system can get a hands-on tutoring session. We're looking forward to getting the Commodores repaired so that we can begin accepting donated systems again.

OTHER RESOURCES...
For readers who may wonder about options for any computer equipment they may wish to donate, here are some suggestions. First of all, don't assume that no one wants your donation. Working modems, especially, are needed by non-profit organizations-modems of all baud rates. Second, you don't have to ship your system if you don't want to. Some of the local non-profit organizations who might be interested include schools, day care centers, community centers, children's clubs like the Girl Scouts, shelters, churches, and programs serving disabled adults. For your donation to be of maximum value, it helps to take a few hours to show the recipients how to use it.

Some people prefer to donate a system without having to take the time to repair it or show someone how to use it. Or they might prefer to see it handled by organizations skilled in the distribution of recycled computers.

We subscribe to the notion that our landfills do not need older computers. People do.
-Rita Laws

NEW PROGRAM ANNOUNCEMENT
From CN80

MAGIC LANTERN written by Richard G. Snow $16.00 plus $4 (S&H) complete with printed manual.

Ever dream of creating your own greeting cards simply and easily, or adding a MAC high resolution picture to your stationary quickly and easily? Well now you can have the program to do it.

Magic Lantern is a program that allows you to Load, Save, Display and Print High Resolution pictures files on a 64K TRS-80 Model 4, Computer. The program runs under TRSDOS 6.2 or LS-DOS 6.3 and requires a Radio Shack or Micro-Labs high resolution circuit board. Printer drivers are included for IBM Proprinter, Epson MX, Seikosha SP-2400 and Epson FX, LX compatible printers. And should run without any problems to any laser printer that supports Epson emulation, or any dot matrix printer that supports the Epson emulation.

Even though there are several high resolution utility programs already available, Magic Lantern has unique features that are not found in any other high resolution utility package. It has new and improved compressed high resolution files which allow you to store more high resolution pictures on a disk. Small printouts can be left-hand justified, right-hand justified or centered on a page. An automatic screen saver function features an audible reminder signal.

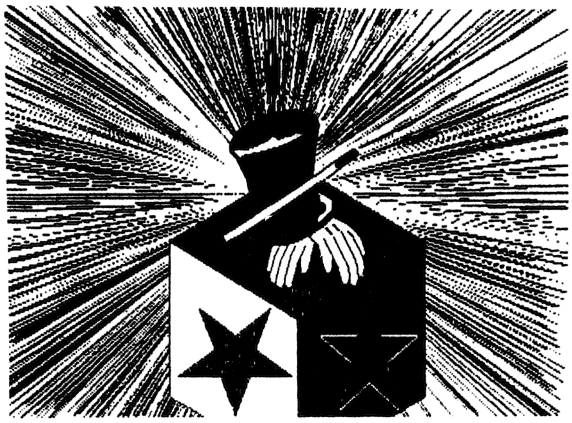
The screen saver function automatically turns the screen off if the keyboard is not used for two minutes and a series of tones from the sound board gives you a warning that the computer is still on but the screen is blank. The warning tones will remind you approximately every two minutes that the computer is still on and waiting for your next command.

The great feature about this program is that it will store your high resolution screens in three formats:

/HR	Standard 19.5K format
/SHR	Super Compressed format
/UHR	Ultra Compressed format

the Super and Ultra compressed format allows you to save more files on a data disk than the standard /HR format.

But what is even more unique about *Magic Lantern* is the fact that it will load /MAC (High Resolution pictures saved in the MacPaint format) without the usual hassle involved in the other MacPaint view and print programs available for the TRS-80 computers. We have in the MACPAINT File Cabinet Library a utility disk volume that contains several of these utilities written by Mel Patrick, Scott Swaine and several print drivers to print these files, all of which we have found clumsy to use at best. Although they did work, Magic Draw brings us pure simplicity in the use and reading of high resolution picture files done with MacPaint formats.
-CN80



TWO BASIC PROGRAMS

And a thank you

by Robert M. Knowles

I had a small problem, when I turn my computer on I sometimes get an error 7H or 11H so I checked all connections and traced it to where the hard disk is connected to the computer, when I have the problem I take this connection out and then reseat it and no more problem for a while, that tells me that it may be this connection so not knowing all that much about it I called CN80 and the man I talked to knew just what the problem was and what to do about it, he was very polite and patient and explained what the problem was and what to do about it.

It seems that the cable as it connects to the computer looses its tension and then looses its grip on the computer edge card contacts. If the connection is not tight the computer is not able to make the connection between the hard disk and the computer so you get an error message. Replacing the part seems so simple, I'm sure I'll have no problem, the man told me how to do it and its so simple my 5 year old grand-daughter could do it. Thank you very much CN80.

CLOCK/BAS Program Listing number one.

I wrote two clock programs you might find interesting. The first one is only minute and second and is a little confused, it wants to run backwards and is only good for 59 minutes, if your timer on your oven is broken you can use your computer to time what ever it is your baking, as long as it is under an hour. The second program is tied to the computers clock and you can set it as you please. Line 10 in the first program is clear the screen then print M S in the center of the screen. Line 20 is to set the time in minutes and put that in. Line 30 is minutes and should be the outside loop. Line 40 is seconds and should be the inside loop. As your computer reads the program and finds a nested loop it will read the inside loop first so its not right to have minutes on the inside to be read first, then we have print in the center of the screen M S again, we have M S in the center of the screen, do we need another? If you look at line 10 you will see that it is within quote marks (''). If you have PRINT then quotes the computer will print what ever is in quotes. But on the other hand in line 50 we have M S with no quotes so they must be variables and stand for something else and they do. As you can see lines 30 and 40 count minutes and seconds and put them in the variables M S and line 50 puts them on the screen. Then we have a simple counter. When the computer reads seconds then drops down to the next line and finds a counter it will stop and count before it will go on to the next line which is next S, then back up to get the next S then put it on the screen. Then it counts to slow things down to one second between S and next S and when S reaches 0 the program will go on to the next loop and add one to minutes. Then down to S for 59 trips through S. Then the next minute until the time you set reaches 0. When the time is done we want to know about it and we don't want to have to set and watch the clock so it would be nice if the computer made a noise to let us know when the time is up. The computer will make a noise to let you know all about it . Lines 90 to 110 we have a very nice alert signal and you can change how long the sound will last by changing line 90.

TIMER/BAS Program listing number two.

Now we come to program two, a very short program but powerful. Line 10 is to set the time, we put it in $, we all know that $ means string, but there are no strings in the time. A lot of times you don't think that the colon is a string character, but it is and the program won't work with out it. It should look like this 00:00:00. Line 20 asks that the time you want be compared to the computers clock and when they match drop down to the alert program and let us know all about it. But if we don't have a match the program will fall through to line 25 and be sent back to test again until there is a match. There is one draw back with this program, and that is when the alert sounds the clock stops. When the alert is finished the clock will start again but the clock will be wrong and must be reset.

-Robert Knowles

SI/BAS PROGRAM

by John P. Jones

I appreciate your publishing my letter and "SI/BAS" program in the 6/94 issue of "Computer News 80". As promised, I am enclosing the program as converted to machine language. I find these much more convenient to use than the BASIC program. As explanation, "SI" refers to "Seikosha Initialization"; "PI" to "Printer Initialization" for the Tandy printers I have (DMP 130, DMP 400, DMP 430, and probably all other dot-matrix printers of the older type). The "3" or "4" suffix refers to model 3 or 4 mode. (Although the BASIC program supplied was compatible, the machine-language programs are not.) The source code is supplied as

well. This can be easily modified by anyone familiar with assembly but who may not agree with my choice of parameters. Dave Goben's "DEA4" was used for assembly (including the model 3 mode programs.)

One problem of interest is that the value 03H is both the code for the Elite print type on the Seikosha and the "end of list" for any data transfers by the computer and the assembler. I couldn't get the computer to read past it. One alternate is to add a value, then subtract it after transfer. I chose instead to handle all print type codes outside of the data list.

As with the BASIC program, the Seikosha must be properly initialized to accept external codes. This need be done only once, as it remembers this during power off. The Tandy printers present no such problem.
-John P. Jones

(Note) The machine language programs and their source code files will be available on Disk Series #26, if you want advance copies of these programs sent $2 to cover disk and mailing costs.

MENU/BAS

A very handy Directory/Menu program for TRSDOS 1.3 and (a bit less handy) LS-DOS
by Henry H. Herrdegen

The Bonus program AUTOMENU by Alan Shoemaker on disk # 23 caught my attention, as I have been using a similar program by J.C.Ditucci/H.P.Stevens from the old Microcomputer News, for which I had to write a little "quitting" program, to get out of it without choosing a program. It also missed some of the amenities I like in my programs. (it's not on my disks anymore.)

Alan's program is much simpler, but again I did a bit of rewrite, in order to make it friendlier and (almost) bomb proof, by adding a few error traps, disabling the <BREAK> key and adding a Sort routine. The <ENTER> key at any input prompt will end the program and remain in BASIC with an active again <BREAK> key. Hating to have to type the #$%&! CMD"S" to go to the DOS, I also added my (almost trademark) choice of <E>nd or e<X>it, and put all the GOSUBs on the top.

And then I thought why not re-write it for the LS-DOS, and ran into some snags. But about that a bit later. References to the Model 4 program are shown in ( ) where applicable, and its peculiarities are noted later on.

I know you never ask for a disk drive which is not in the system, or ask for a /BLD (/JCL), /TXT, /DAT or any other non-program file to run, but if your finger slips, it's annoying if the program crashes and you have to start to RUN it all over. So, that's where the traps come in, getting you back to either the disk drive input, or to select the proper file. Also, the <BREAK> key managed to screw up sometimes, so I locked it out for the duration.

What the program does is simple, you select the drive you want it to read, it reads a CMD"D:x" (SYSTEM "CAT:x" (which is not sorted when called from BASIC!!??) directory, then assigns numbers and letters to the files and displays that new, sorted directory, giving you the choice to re-start the menu (for another drive), or select the prefaced number or letter to run the subject file, may it be a /BAS or a /CMD (tongue in cheek) file.

And therein lies the only limitation. The maximum it can read properly is 50 (61) files, quite a full normal disk. By "Peeking" the video addresses, it can only digest what's on the screen. With more than that number of files, the screen may scroll up, the menu looks ok, but there will be files missing, from the end, or even from the middle of the CAT, and naturally all which may have scrolled off the screen. The menu will display the files it could read alphabetically sorted anyway. A notice on the screen will alert you that there are more files on this screen.

The added traps are as follows: The ON ERROR GOTO 30 (36) in line 2 catches non existing files, Error #128 (64), and line 31 (37) displays the appropriate message and gets back to the "input" prompt. Non program files, /BLD, (/JCL), /DAT and /TXT are caught in line 27 (32), and line 28 (34) states that fact, again resuming with the input prompt. If you use any other extensions for non-program files in your system, they are easily inserted before the "THEN..." with another "AND" in line 27 (OR in 32). Line 5, "GOSUBed" right after loading the DIR, checks for the DOS error message "Drive not in system" (the check for the 8No Disk9 message is in L 15) or, if the DOS (1.3) had been patched with Andy Levinson's "Error Arrow" (on PUP1.3 disk), for the empty first file space. Line 32 and 33 (38 & 39) are the general trap, trying to catch the other errors, cancelling the

<BREAK> lock and printing the error number and the error line for your investigation. Line 17 (21) check if there are more then the readable files on the disk, and display the line 29 (35) message.

These traps should take care of all the usual errors caused by wrong inputs. If another error should slip by the general trap mentioned above, cause the program to abort to BASIC, do not neglect to re-activate <BREAK> by either re-running the program and ending it normal, or by entering CMD"B","ON" (POKE 124,PEEK(124) and 239, also CLEAR,65535 if you need high memory for another program.)

Non program files other than the ones caught in line 27 (32) may result in a "Direct statement in file", "Undefined Line Number or similar error, remain in BASIC, but abort and erase the MENU program. A nuisance, so put any possible extensions into the "trap" line, as mentioned above. That line can get quite long, I can think of /FLT, /CTL/, /ASM, /DOC, /etc., but one can not please everybody, so there are only a few of the most common in there, to save a slip of the finger, which is all they do.

The algorithm reading the CAT and creating the menu display in the III version is basically unchanged from Alan's program. In the 4 version, I have used a variation, derived from the code of my DIRPRTS4/BAS on disk 17 (5.4-16).

Another little tip: if you have other then 4 drives in your system, adjust the number of "ASC(C)>51" in line 14 from 49 (for 2 drives) to a possible 55. It will prevent unnecessary error hunting, and an input beyond your highest drive will snap back to the line 12 input prompt.

Now to the LS-DOS problems: Unfortunately, the performance with /CMD files is much different, mainly due to the fact that SYSTEM"RUN xxx" wants to return to BASIC when finished. Contrary to what the good books say, it does permit other than library commands to be executed, but not all (is that another "undocumented" feature added to the 6.3.1?). Some /CMDs, like FORMAT, TED, INDEX4, and others not needing any additional parameters, function properly, but the return to BASIC may do some nasty things, like freezing the keyboard. Line 4, called before going out to the System in 31, will have reset the <BREAK> and the Video Ram, which seem to be the main culprits in those shenanigans. It's no cure all, some may even act up after displaying a perfectly normal "LS-DOS Ready". Best to re-boot. Most others will result in "ERROR 70", the "Command aborted", and return to BASIC with the program intact. Trial and error will tell you which ones are safe to use, and nothing serious happens with others. Pine for the good old CMD"I","xx", even if it did not return to BASIC. Which is the problem in this case. If anyone could help there, and make the MENU4 as slick as the MENU3, please let me know!! Who says the 1.3 is a lousy DOS ??

Further more, since the screen display is paginated, the program will not continue without an <ENTER>, if there are more then 72 files to be read. With up to 80, the screen will not scroll when the program is continued, and the Menu will read the first 61 files (15 rows + 1 file), and sort them. Over 80, the screen scrolls, and things get muddled, missing some files out of the middle too.

I hope these horror stories will not scare you away from trying out this very nice program under LS-DOS. Who wants to load a BASIC program in order to run a /CMD program anyway? What these Menu programs do best, is avoiding Filename spelling and typing errors when calling for a program, and then getting a File not found squawk, when you darn well know it is there. A Number or letter is hard to misspell, but more then 35 filenames still demand watching if you are in caps or lower case! The little wait to get the CAT read and sorted is well worth the wile. Have fun and keep the 80 humming!

BUG REPORT:

In the original AUTOMENU as it is on disk #23 there is an error in line 24:
"24 .....THENC=C-55:..." has to be: ".....THENC=C-61:...", otherwise a selected file with a lower case call letter will be the 6th file further on the list, or an Error!!
-Henry H. Herrdegen

ALLWRITE STYLE SHEETS

by Ronald Garbin

Suppose you've drafted a document, perhaps on legal-sized yellow sheets from a pad, or perhaps on the pages of one of those small black notebooks with three ring binders. You may even have keyed into your computer the entire text of your document. Suppose you have. Suppose you are not yet certain of what format you want. Suppose, indeed, that you expect to employ two, perhaps more, distinct formats for printing your ASCII text.

This could happen, because the mere layout of a document can undergo changes to suit different purposes. A draft version often will have at least double spacing of lines, and probably print as a monofont, that is, a fixed pitch. A final version you will more likely want to print single-spaced, in a proportional font. I find also a condensed version of text can be useful. For that, the point size of the font(s) will be smaller, the line spacing less, and so, to maintain legibility, the line length between margins must be narrowed. This may mean printing text in two or more columns.

After all, when I'm lolling in my hammock, or sprawling on a sun-drenched beach, or borne along on a litter by my personal servants, a large document would be awkward to handle. More realistically, on a train or tram or bus, how convenient just to pull out a few condensed pages and make a jot here and there. To turn quite serious, let me say that automated access to a variety of ready-made formats makes a useful feature in a word processor. Users of WordPerfect, Microsoft Word and other MS-DOS programs can employ document styles. So can Model 4 users of the word processor Allwrite.

The Allwrite Text Formatter recognizes the embedded command (;im) which lets you insert, for printing, the contents of one file into that of another. To define a style, you merely insert, at the cursor place in your text, a command of the form:

```
;im STYLES,Format
```

STYLES is the name of a disk file you would have created with the Allwrite Editor. Format signifies a segment in that file set off by the label command ;lb. You might have several such segments in the one file. Here is the segment to format the present article in the style of Computer News 80:

```
. . . . .
;lb CNEWS80
;lm7;ll71;juon;pi30;sd2;es%;cb2,34;se%
;en CNEWS80
. . . . .
```

I keep this in ALF/DEF, and invoke it with ;im ALF/DEF,CNEWS80.

Printer default files, like HPLASER/DEF, already give you some grip on the formatting of your documents. For instance, I use:

```
;XTR,TransIQE/TAB
;TRR
;SY@27,38,108,45,49,53,53,117,43,48,90
;sd0,y;PL60;TM3;BM3;lm10;FOOFF
;tb>4,10,65r
;pp3,1,d
;se97=@(~;pi+2~@)
;se98=@(~;pi+1~@)
;se99=@(~;pi128~@)
;se94=@(~;br~
```

The deferred (d) command ;pp3,1,d makes paragraphs print with indentation of three (3) tenths of an inch, and with a separation between paragraphs of one blank line. Each occurrence of ;pp will invoke this behavior until you specify new parameters (e.g., ;pp4,.5).

The ~ signifies the weak link character (18H), described in previous articles. To the Text Formatter it functions as a carriage return (0DH); so you can string together in one ;se definition, both text and format commands, including more than one format command that requires its own line, or must appear last on a line.

To go beyond using just the printer default file, assume from now on that connect is on (;co on) and consider the next example.

Suppose you would like to adopt, as one possible basic style, a dividing of a document into sections. Each section must start with a heading title in large boldface (;pi56, say), followed by a blank line, followed by the section text in a different, smaller typeface (invoked by ;pi30). The section will typically be divided into separate paragraphs; and at the end of the section two blank lines will separate it from the section that follows. You needn't settle all these details beforehand. Even prior to choosing a particular style, you could just key in your text as follows:

```
. . . t e x t  f o r  s e c t i o n  l . . .
@@1SECTION m HEADING@@2 . . .
. . . t e x t  f o r  s e c t i o n  m . . .
@@7
. . . n e x t  p a r a g r a p h . . .
```

```
@@1SECTION n HEADING@@2 . . .
. . . t e x t  f o r  s e c t i o n  n . . .
```

The substitution variables @@1, @@2 and @@7 won't print at all, unless you have previously defined them (with ;se) to equal non-null values. For the above example, in your printer default file, or at the start of your document, or in another file embedded there, you would key in:

```
;se1=;sk2;cp3;pi56~
;se2=;pi30;sk~
;se7=;pp
```

The ~ again denotes the weak link character. The ;cp3 ensures that no page break can split the section heading from the text that follows.

Of course you don't need variables at all, if from the start you already know what you want for the final layout of your document. Suppose you don't know. Use of substitution variables lets you defer your choice of formatting. When you do make up your mind, you need only express your selection of formats in the ;se commands.

Suppose you want to print, at the foot of each page, also the name of the current, that is, latest, section on that page. To do this, insert, with each new section name, a bottom title command:

```
;bt/SECTION m HEADING/-$-/SECTION m HEADING/
@@1SECTION m HEADING@@2 . . .
. . . t e x t , etc.
```

This certainly will work; but a different method exists. Change all your @@1's to ;se1=, so your typical sections look this way:

```
    . . . .
;se1=SECTION m HEADING
@@2@@1@@3@@1@@4@@1@@5@@1
 . . . t e x t . . .
@@7
 . . . t e x t . . .
;se1=SECTION n HEADING
@@2@@1@@3@@1@@4@@1@@5@@1
 . . . t e x t , etc.
```

At the start of your file, or in the file you enbedded there, set:

```
;se2=;sk2;cp3;pi56~
;se3=~;pi30;sk;ot//
;se4=/$/~;et/$/
;se5=//~;tc
;se7=;pp
```

This supports the required style, plus the printing of the section name in both odd and even page titles. The ;tc even ensures that the section title goes automatically into your table of contents. Section after section displays on screen concisely, and prints as specified.

As an alternative, you could embed the style. In ALF/DEF, for instance, put

```
;lb SECTION
;sk2;cp3;pi56
@@1
;pi30;sk;ot//@@1/$/
;et/$/@@1//
;tc@@1
;en SECTION
```

At the start of your document define ;se2=;im ALF/DEF,SECTION. Then begin each section of text with:

```
;se1=SECTION HEADING
@@2
. . . t e x t . . .
```

The embedding each time for a section must delay your printing somewhat; but this method does give you a simple framework for whatever style you want.

A parallel exists here with WordPerfect and its reveal codes. True, you can't remove the references to substitution variables (e.g., @@1, @@2, and so forth) without giving up control of the format (style); but strings like @@2@@1@@3 . . . , etc., are still fairly compact and easy to insert.

Consider another example. Suppose you want to print a document that consists of entries as in an encyclopedia or bibliography. You might want to include the names of moons and planets, or favorite recipes, or liquor mixes, if you're a drinking man. Then you might like each entry name to stand out, perhaps in bold face, as a hanging indent. You can derive that style from our basic layout.

```
@@1ENTRY NAME m@@2
. . . t e x t . . .
@@7
. . . t e x t . . .
@@1ENTRY NAME n@@2
. . . t e x t . . .
```

Just define:

```
;se1=;sk;cp4;of;of+3~@*2
;se2=: @*0
```

;se7=;sk

The expressions @*2 and @*0 turn on and off Allwrite's built-in bolding, in case you have no specific bold font. The offset command ;of+3 indents by three-tenths of an inch all text lines after the one that immediately follows. This offset continues until cancelled by the ;of in the next @@1. But immediately following in that, a new ;of+3 is encountered, which causes a new offset after the next ENTRY NAME.

To print your document in two columns, you may want to reduce the point size of your font, and perhaps even change line spacing. All this can appear at the start of text. Suppose then you would like to have on tap three possible styles: a draft style printed in a monofont (;pi12) with double spacing (;ls2); a final style printed proportionally in 11 point size (;pi30), single spaced (;ls1); and a condensed style in 8 points (;pi24), at 8 lines per inch (;li8), in columns. Any of these three possible styles you can specify by setting just one value for the new substitution variable @@6. Start your document by inserting (or embedding):

```
;se6=0
;ke Press <ENTER> for draft. Else insert
;se6=1 for final. ;se6=2 for condensed.
;go STYLE@@6
;lb STYLE2
;pi24;li8;cb2;go TEXT
;lb STYLE1
;pi30;ls1;go TEXT
;lb STYLE0
;pi12;ls2;bt//Draft--@@0//
;lb TEXT
...start text...
```

The second line (with ;ke) halts printing and prompts you with a message to enter an expression of the form ;se6=xx. This way you choose your format.

Notice that, for the draft style, we've also introduced a bottom title statement (;bt), which will prompt you for the date of the draft. That, once entered, will print centered at the foot of each page.

LONG DOCUMENTS

The model 4 version of the Allwrite Editor can accommodate, at most, about 34K of text. With chaining (;ap and ;ba) you can handle longer documents. If you print a long document from the beginning, however, its initial style remains in force unless, and until, you explicitly change it.

The Prosoft manual skimps advice on how to print quickly an excerpt of pages that start far into the document. The manual suggests that you first find some natural page break closely preceding the page(s) you want to print, and then use that page break (if also at the beginning of a chained file) as the starting point of your print run, so that Allwrite can quickly reach the pages that interest you. This advice says nothing about formatting the excerpted pages. Yet between your printer default file and your pages of interest, you may have inserted many format instructions. It may be worthwhile to describe here a systematic way to print formatted excerpts of a document.

Suppose you want to print pages 31 through 34, and suppose you know EXACTLY where in the text that page 28 begins. If connect is on (;co on), that beginning doesn't even have to occur at a natural text break. You just need to know the first character on page 28. In front of it, insert the following format statements:

```
;go PAGE28
;lb PAGE28x
;pa28 . . .
;im ALF/DEF,format
;lb PAGE28
Start of page 28 text characters . . .
```

Between the labels PAGE28x and PAGE28, you can embed (or insert) your formatting style. Typically, such instructions would match exactly those at the start of your document. The ;go command ensures that during a normal printing pass that includes earlier pages, Allwrite doesn't waste time reformatting what is already correctly formatted; also it skips the extra and unwanted page break that would result from ;pa28.

To print the desired excerpt, print the file with options, and on the option line key in:

```
;pg31,34;go PAGE28x
```

Processing starts with page 28, actual printing with page 31.

Of course the start of page 28 will differ for different styles. To print excerpts, you do have to keep track of different page breaks for different styles.

My discussion here presents fairly simple examples. You can handle more complex styles, although naturally they demand more effort. In all cases, Allwrite lets you save your formatting in a printer default file or other file for later embedding. Then re-use is easy.

-Ronald Garbin

Sound (Noise) from BASIC Mod 1 & 3

by Steven B. Joy

Hoping all my grammar and information is correct. I will now embark on an attempt of giving coherent examples of how to get sound from BASIC programs (which will not include any machine. language routines). We will start with the good stuff first. For those like me who don't seem to get to the end of most articles.

1) EXAMPLE ONE:

The Model I & III of any configuration will require only an amplifier and speaker to use this routine. The Radio Shack Mini-Amp (277-1008 for +- $11.95) is perfect for the job and will need to be connected to the " AUX " plug that goes to the cassette recorder. Another way of amplification is to remove any tape from your recorder, press back the anti-record lever (near the left back corner), and depress the PLAY & RECORD buttons. Now plug a speaker or headphones into the EARPHONE jack and your set.

```
100 FORA=0TO100: OUT255,0: OUT255,1:
NEXTA
110 FORA=0TO2000: IF INKEY$<>"" THEN
RETURN
120 NEXTA: GOTO100
```

On the Model III changing line 100 as follows will also produce the same sound.

```
100 FORA=0TO100: OUT252,0: OUT252,1:
NEXTA
```

There is a choice of two volumes, "OUT255,2: OUT255,1" is louder then what is shown in line 100. You may choose the one you like. Lines 110 and 120 are only to repeat or exit the routine.

2) EXAMPLE TWO:

With any system that has a PRINTER with a BUZZER or BELL. This very easy three-liner will produce a sound that is great for letting you know when a large sort has been completed and has a number of other uses.

```
100 LPRINTCHR$(7)
110 FORA=0TO2000:IF INKEY$<>""THEN
RETURN
120 NEXTA:GOTO 100
```

3) EXAMPLE THREE

This sound generating idea is for only the Model I users that have the expansion interface. I must admit that it is a little hard on the machine. What it does is toggle the cassette select latch. See line 100.

```
100 FORA=1TO10:Poke 1408,A:NEXT
110 FORA=0TO2000:IF INKEY$<>""THEN
RETURN
120 NEXTA:GOTO 100
```

4) EXAMPLE FOUR

I must confess that the up coming idea is a little off the wall, and that is why you see it here last. At least those of you like me that don't get to the end of all articles (and who aren't reading this will have been spared).

The only requirements of this routine is that you have a cassette recorder and a blank tape to go along with which ever system you have.

Here is the pitch, it turns your recorder on and off to synchronize what ever is on the tape with the flow of the program. This is probably best suitable to long instructions or programs that have a rigid flow.

With the Model III:

```
100 OUT236,2:     'TURNS TAPE ON
110 FORA=0TO####:NEXTA:'EATING UP
TIME
120 OUT236,0:     'TURNS TAPE OFF
```

With the Model I:

```
100 OUT255,2:     'TURNS TAPE ON
110 FORA=0TO####:NEXTA:'EATING UP
TIME
120 OUT255,0:     'TURNS TAPE OFF
```

With both systems unplug the black (EAR) and large grey (AUX) plugs from the recorder to hear what has been previously recorded on the tamp. Leave the small grey plug (REMOTE) connected.

If you liked the article don't hesitate to let me know through CN80. But if you thought it a little lacking, I'm 112 years old - blind in one eye and can't see out the other and haven't eaten in three days. So don't kick me around -- Enjoy.
-Steven B. Joy

KEYBOARD REPAIR

FOR THE MODEL 3 AND 4 Part Two.
by the CN80 Staff

As we mentioned in part one of this article you should never use any cleaning material on your keyboard except a fast evaporating 'freon' type, and especially **NO WD40.**

We may not be experts on WD40, however we were one of the distributors of the product when it was first introduced in the 70s and spent many hours demonstrating its use to the various large industrial and electrical companies in our region. WD40 contains many solvents for removing oil deposits, grime, and dirt. It also contains a lubricant that will work wonders in lubricating solid metal parts. It also contains a water repellent. One of the demonstrations we used to use to introduce the product was to take a small strip of steel and dip it in a glass of water, then hold it up for the prospect to see and spray it with WD 40. Whereupon you could see the water being chased away from the piece of steel. - Of course water and oil do not mix, but it was one hell of a demonstration.

When working on an offending key contact block as an individual component, you can take the outer cover apart after it has been removed from the keyboard as described in part one of this article in the June issue. To do this look at each side of the contact block on two opposing sides you will see the small narrow clip arms which hold the block onto the keyboard itself. On the opposite sides you will see that the block has two upside down "T" looking sections that protrude down from the top of the block. These hold the top cover of the contact block to the bottom shell of the block. Carefully insert a narrow knife blade, or similar object under the bottom of the inverted "T" section to release the top cover.

Isn't plastic nice, everything is molded these days to just snap together. No screws, no bolts, no nuts to fool with. But if the plastic holding parts break when releasing them -- then your part is worthless because you can't put it together again. Just like Humpty-Dumpty, who fell from the wall and all the king's men couldn't put him together again. So be careful.

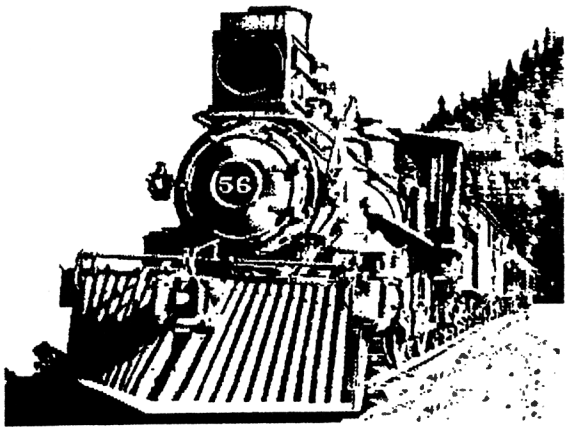
Once you have the top of the contact block released from the bottom shell, out pops a small spring with a suction cup looking piece attached to the bottom of it. Look under the plastic suction-cup-looking object and you will see a small black dot.

This small black dot is made from a carbon substance which has enough conductive material in it to short across the two silver looking contacts attached to the bottom shell of the connector block. This small black dot is the culprit in most keys that are not stuck in moving up and down, but still don't work. Don't touch it, don't try to clean it, don't try to do anything with it. Because the slightest thing will destroy the conductivity of the material and all is lost. That is why we tell you not to use any lubricant on your keyboard. Because a small drop of oil residue coming into contact with this small black dot will prevent it from working. Also any alcohol, or solvent needs to be used very sparingly -- if used at all on a sticky key.

Once you take one of these contact blocks apart, you will have a very good idea of how they work and where dirt or other matter getting into key board and the moving plastic "plunger" and the "plunger guide" of the contact block will make the key not depress easily. Or the spring does not push it back into the upright position, which cause the common problem of some keys printing two characters instead of one.

If you are a hardware hacker who just can't resist seeing the inside of things and how they work, and if you have a spare keyboard contact block, go ahead and open it up. But chances are once you do the block is destined for that great computer heaven in the sky.

The best thing is to not try to repair the contact block itself, but to replace it with a working block. Replacement blocks and key caps are available from CN-80. Contact blocks $1, key caps 50 cents.



A sample of art work printed with Magic Lantern.

SCRIPSIT PRO TIPS

by Raymond Page

After purchasing Scripsit Pro from CN80, I called CN80 to discuss some of the areas that I was unfamiliar with and they gave me some very useful tips on how to manipulate the program and the tools that come with it. So I thought I would write a short article that would list some of the tips that I found useful, so that others would be able to use them too.

I was puzzled about what was the best way to address an envelope when constructing a business letter. The suggestion I received was to use the "User Key" setup in Scripsit Pro to send the address lines to a separate file. So what I did was open a document called "Address" on the same disk that contains my business letter data files. The standard number 10 business size envelope is 25 line high, so I set the number of lines for my "Address" document at 25 lines per page. Then I opened the document and pressed the CTL Q and pressed H for Header. I added 16 blank lines as a standard header.

By doing this it would place the first line of the address on line 17 of the envelope. About 2-3/4 inches down from the top of the envelope. I then entered a dummy four line address. And pressed control P to print the document. When the printer specifications came up I entered the information that told the printer that the paper was 25 lines long and I wanted to start printing on column 48.

My printer is set to print at 10 characters per inch so you may have to adjust the 'start printing column' number if you are printing with 12 characters per inch. A little experimentation will show you where the address will be printed. If you use smaller envelopes all you have to do is adjust the number of blank lines in the header and the number of the column from the left hand edge of the envelope that you want to start printing on.

After checking it all out by printing a couple envelopes I then went back to the disk that I set up with Scripsit Pro to write business letters. By that I mean I have several master Scripsit Pro disks set up for different jobs. One has the standard margins set for business letters, for example, one has the margins set wider for writing lists that are set one inch from the left edge of the paper, and within a quarter inch of the right edge of the paper. I do this so that I can have plenty of room to punch the paper to fit into a three ring binder.

But back to the envelope addressing. I set the user keys on my Scripsit Pro disk that is used for letter writing so that when I write a persons name, company name, address, city, state and zip on a letter; which usually takes four lines I press control zero and the program automatically sends the four lines to the address data file. If there is only three lines used it still sends four lines, but one line being blank doesn't enter anything in the "address" data file.

How do I do this with one key, well that's where the instructions from CN80 came in.

To set up a user key you first enter any document. Place the cursor at the beginning of the first line of the address. Then press control U (be careful from here on because you need to have your moves planned out because everything you do will be recorded in the User Key file on the zero line). Then you press control B - for block action, then press G four times to mark the four lines of the address. Then press B again to end the block being marked. When the choices come up on the bottom of the screen press F for File. When the program asks what is the name of the file type Address and press Enter, the program will then ask you if you want to add, or replace the file. You type A, which will add the four address lines to the "address" data file.

Then press Control U again. This tells the program that you are finished setting up a command string on the User Key line zero.

After that all you need to do is finish writing your letter print it and leave the document. When you are at the main menu you open the file called "address" and place an envelope in your printer.

Place the cursor over the first line of the address and use block action to block out the four lines you want and press P for Print, and your envelope is printed.

You could set up a user key to block four lines and print them right from within your letter, but you would always be changing your printer instructions, so it is easier to have the printer instructions permanently installed in one file like I did with the "address" file. The other nice thing about this method is that while you are storing the addresses in a separate file you are building an address list for future use. If you need to find an address, just open the file and use down arrow and the S key, and give it part of the name you are looking for. The search function will pop the cursor right down to the name in the list. Neat, yes!

-Raymond Page

OPEN FORUM

LTR: For those people with Model 4 computers and using DEBUG, the following patches will permit the 4 lines of memory at the bottom of the screen to be increased to 8 lines. Also, when incrementing, a new 8 line appear. This makes it almost unnecessary to use the S command for a full screen.

The patches to SYS5/SYS.SYSTEMS6 are:

```
1e55=14
1f37=08
1eb2=80
1eca=80
```

I thought some of the readers might find this useful.
-Ed Fraser, Cape Coral, FL

Q: I have had RS/Tandy computers since early 1981 when I bought a 48K Model I with 4 SD floppy drives and a Centronics 700 printer (the LPI was about to arrive).

I now have two 48K Model Is, one 128K Model 4, two 64K Color Computer 2s, one 512K CoCo 3, one 24K Model 100, two 768K Model 2000s, one 640K 1000HX, one 768K 1000RL-HD and one 4 Meg. 386SX. Each family of computers was bought to do things that previoulsy owned machines couldn't do.

The printers that I have bought from Tandy have included Centronics 700, LPI, DMP-105, DMP-132 and a DMP-203, Brand X printers have included a Gemini 10 and a Gemini S-G (used) and a Xerox 4004, all with IBM ports.

I must have been lucky in that I always had the right cable for the printer until I bought the DMP-203 for my Model 4. It just doesn't work! Further research indicates that there was the Tandy and IBM printer ports. The MSDOS machines have 4 cables to cover the various combinations. The Model 4 has a Tandy port and the DMP-203 has an IBM port. Where can I get a cable so that the Model 4 and the T2000 will run the DMP-2037? Even instructions on houw to make a cable would do.
R. L. H., Albion, NY

A: As to the printer cabling: to the best of my recollection pin #31 is used for the RESET (active low) signal on the IBM style interface, while the TRS-80 interface uses pin #33 for this function (if used at all). While this is not a problem in itself (since a lack of the RESET signal would mean that the printer would not initialize during the 'PC' boot process, it suddenly becomes a problem when the IBM interface provides a ground on pin 33 to a TRS-80 printer, or when a TRS-80 provides a ground on pin 31 to an IBM printer. Both of these normally happen because unused pins are frequently grounded, and in this situation the printer interperets the ground as a "signal low" and responds by initializing the printer. Since the signal never goes high, the printer never stops initializing.

To make a cable for a TRS-80 interfaced printer to use on a "PC", buy a printer cable with snap:apart shells on each end, take the shells apart on the Centronics connector (the printer end of the cable), identify pin #31 and #33 from the numbers on the connector and with a soldering iron, remove the wire from pin #33, then move the wire from pin #31 to pin #33, where you removed the first wire. You may wish to ground pin #33, but this is not usually necessary.

To make a cable for an IBM-interfaced printer to use on a TRS-80 (assuming you have the means to assemble connectors on ribbon cable), separate and clip off about an inch of wire #33 to get it out of the way, then separate about two inches of wire #31 and move it to the position for wire #33 before clamping the connector on the ribbon cable; leave position #31 unused in the connector. In both cases (and assuming you have oriented pin 1 of the connectyors to the colored stripe on the ribbon cable), count from the colored stripe to find the wire number. These instructions refer to the computer end of the cable (the card-edge connector).
-David P. Miller

Q: I have a mystery I hope somebody can solve. I use Deskmate ver. 1.00.00 on my Model 4D and find it quite adequate for many of my needs, but on the filer portion of the system I have found a little "problem." When I print the entire list on the printer I find that most of the time it prints the list in one continous block. Sometimes it prints the list in 10-block groups separated by a blank line. This is a feature that I like, especially for a long list with some wide spaces between the entrys. I would like to call this function at will but can find no documentation on it. Can someone help me?
B. P. Freeland, Pa.

A: We at CN80 use Deskmate very seldom but have tried to duplicate your experience without much success. However if some of our readers have had more experience with Deskmate on the Model 4, they might have the answer.

If you have the answer, or a suggestion to this problem send it in, it will be forwarded as usual.
-CN80

LTR: Thank you for your wonderful magazine and service to the Tandy community.

Cleaning out my cupboard the other day I came across three binders of a magazine produced in South Australia called MICRO 80. I have issue 7 produced in June 1980 through to Volume 7 issue 7 dated Feb. 1984. These are available free to anyone who cares to pay only the postage or wishes to collect them. I can be contacted at PO Box 224 Tullamarine 3043 Australia.
-Ray Everingham

LTR: Roger L. Favorite, 1010 E. Traverse Lake Road, Cedar, Michigan 49621 (616) 228-5481 writes that he developed many programs in Basic while he was assistant treasurer of his church and that anyone interested in this type of program could contact him for copies.

The programs include:

Giving: Records by name and giving number.

People: Records are keyed to a Family name will print labels, lists, or to screen.

Payables: 3 payable programs for payroll, vendors, and missionaries.

Vendors: File records for vendors and current or accumulated payment analysis.

Missionaries: Monthly payment recod to mission boards, etc.

If you are interested in these program contact Roger directly.

LTR: To David Miller C/O CN80. Your MS-Utilities program that I recently purchased is truly a winner! For two or three years I have been literally sweating blood, worrying about my burgeoning files on TRSDOS/LS-DOS and wondering what I would do when my TRS-80 finally met its end.

Those worries are all behind me. After a marathon session I have transferred all my files to MS/DOS with the invaluable aid of your very workable program. I really can't praise your program enough.

I am a certified klutz at computers, but despite that handicap, I was able to almost immediately get your program to do the things it was supposed to do. And, when I screwed up - which was frequently - your program and manual put me right.

Perhaps, my TRS-80s life will outlast me - I hope it does for is has served me well for all my uses - but if it does not, my files will always be able to find a home.

So, I thank you again for your program and for putting my mind at ease!
-C. R. A. Prescott, AZ

Q: I purchased some high resolution programs disks form CN80 but do not know how to load and use them. Please exsplain it to me.
-K. T. N. St. Petersburgh, FL

A: High Resolution files are pictures created either by hand using a program such as David Gobens Magic Draw, or are created using a scanner and stored in a High Resolution storage format such as the /HR format or /RLE format or /MAC format, or several other formats. Each storage format is different from the other and their are programs that will convert one format to another storage format.

The most commonly used format for the TRS-80 computers is the /HR format. Using David Gobens High Resolution Utilities package you can load the High Resolution file into the computers memory and then view it on screen or print it out on your printer. Or you can use the new program *Magic Lantern* to do about the same thing. But it takes a special utility program to accomplish much of these tasks. It also requires that you have a high-resolution board installed in your computer. Radio Shack high-resolution boards are no longer available, except on the used market. Micro-Labs high resolution boards are still available from CN80.

Q: I have an amateur radio PACKET program on a TRS 1.3 disk which also contains some files which can be seen but when I do a backup of that disk to use with my other computers I cannot copy or backup anything so there must be some type of protection. Is there a good copy program like my Mod 4 FBACKUP which will allows me to make working copies of this disk.

I also have another program which when I copy it to another disk the program moves off of the disk it was on ..great fun. So my problem is the same as above. These programs are over 10 years old and letters to the originators get returned.

Over the years I have noticed that several of your past subscribers have been amateur radio operators. Amateur radio operators are able to use their [TRS-80] computers to talk all over their immediate area via ham radio. They can also send messages to other hams throughout the the world using PACKET. I am wondering if you would welcome an article on how to become an amateur radio operator (Ham) and how they can use PACKET with their computers. The airwaves are free so there is no cost except for the equipment (modem) that is used and their transceiver.

I would like to see a discussion sometime about the different types of printers (new) that can be used with the Mod 4, along with your mentioning specific printer names that can be used with the Model 4. I used to look at all printers to see if they were Centronics compatible.
S. R. Valley Center CA

A: The amateur radio PACKET working in the three mode sounds like it does have some type of protection scheme built in. From the age of the program that you mention it probably was created in the era (10 or 15 years ago) when many programmers tried to protect their work against piracy by making either "backup limited copy" disks or programs that would wipe themselves out of the source disk when copied to another disk.

David Goben's Model 4 FBACKUP program does ignore most of the Copy Limited schemes, as does DISKCOPY which comes with LS-DOS 6.3. His Model 3 FBACKUP works with LDOS 5.x, but not with TRSDOS 1.3. So we don't know how to advise you on these older programs as far as a system that will back them up without losing the originals, or refusing to backup at all.

Since they are PACKET programs we do have the latest versions of the EZ PACKET radio programs which seem to be the "standard" now used by hams. They were written by Jim Martin, who died some years ago, but most of the ham radio operators praise as the best. It is available in the Model III format from the File Cabinet - Disk # M3COM24 and in the Model 4 version - Disk # M4COM25. $3.50 a disk plus mailing. It might be advisable to switch to either of these PACKET program because there is no problem in backing up these programs.

Specialty utility programs like SuperUtility might be able to doctor the programs that get erased from the source disk when making backup copies. But SuperUtility is no longer available except on the used market, and then it is fairly complicated to use as it was developed for those who have programming experience in depth. We could make you backup copies of your disk using our special restoration equipment, but the programs we use are not available on the commercial market. Call if you would like to have prices.

Regarding your suggestion about printers, we would love to be able to afford to purchase every new printer on the market - But considering our budget it would be impossible. Manufactures rarely are willing to supply samples of their new printers to publishers that support computers that are considered to be outmoded. (Little do they know how many people are still using their original computer, but may have worn out their old printer.)

In any event, the term "Centronics" refers to the type of cable connector that the printer has on it and not to the printers emulation abilities. The centronics type connector (which is more rectangular in shape and has a solid bar running lengthwise in the middle with flat-plate-looking contacts) was popularly used for parallel signal sending computers, whereas the DIN connector (which is round and has from 4 to 8 pins) was popular in its use for serial signal sending computers. Now that trend has faded into a mixture of several types of connectors in use. Since the model 4 and 3s send a "parallel signal to the printer" you need to make sure that the new printer has the parallel signal receiving capacity. Most new printers are set up to work by receiving both parallel and serial signals. Some printers do this by having two connectors, one parallel and one serial. Newer laser printers have an automatic sensing device which senses the type of signal being sent by the computer and switches to receive it. The main part for Model 3 or 4 users is to have a printer that is both IBM and Epson emulation as their standard setting via dip switches. The Epson emulation is what you need. - Or better yet, purchase your printer from CN80, where you know that you will get the support you need. And yes, we would like a ham article -- or even two.

CLOCK/BAS PROGRAM LISTING NUMBER ONE by Robert M. Knowles

```
10 CLS:PRINT @(12,35)," M      S"
20 INPUT"SET TIME ";A
40 FOR M=A TO 1 STEP -1
50 FOR S=59 TO 0 STEP -1
60 PRINT @(13,35), ;M;": " ;S
70 FOR N=1 TO 960:NEXT N
80 NEXT S
90 NEXT M
95 FOR Z=1 TO 10
100 SOUND 1,1:SOUND 7,1
105 NEXT Z
```

TIMER/BAS PROGRAM LISTING NUMBER TWO by Robert M. Knowles

```
10 INPUT"SET TIME: ";A$
20 IF A$=TIME$ THEN 30
25 GOTO 20
30 FOR B=1 TO 10
40 SOUND 1,1:SOUND 7,1
50 NEXT B
```

MENU3/BAS PROGRAM LISTING NUMBER THREE by Henry H. Herrdegen

```
1 '"MENU3", TRSDOS 1.3, by A. Shoemaker; P.D. Chg'd a bit: H.H.Herrdegen 940402
2  CLS: CLEAR 500: DEFSTR A-C,O: DEFINT D-L: DIM A(51): ON ERROR GOTO 30
3  OE=CHR$(14): OF=CHR$(15): CMD"B","OFF": GOTO 12
4  C=INKEY$: IF C="" THEN 4 ELSE IF C=CHR$(13) THEN 34: RETURN ELSE RETURN
5  IF PEEK(15376)=105 OR PEEK(15376)=110 THEN 12 ELSE RETURN
6  IF D=>48 AND D<=57 THEN D=D-48: RETURN
7  IF D=>65 AND D<=90 THEN D=D-55: RETURN
8  IF D=>97 AND D<=122 THEN D=D-61: RETURN
9  IF H<10 THEN B=RIGHT$(STR$(H),1): RETURN
10 IF H<36 THEN B=CHR$(H+55): RETURN
11 B=CHR$(H+61): RETURN
12 PRINT OF @140, "Which disk drive number? ";: PRINT OE;: L=0
13 GOSUB 4: D=ASC(C)
14 IF ASC(C)<48 OR ASC(C)>51 THEN 12 ELSE PRINT C;: PRINT OF
15 CMD"D:"+C: GOSUB 5: IF PEEK(15375)=32 THEN PRINT: GOTO 23
16 PRINT OF;: J=15375: E=J: PRINT "  Creating the Menu ";
17 F=F+1: IF F=>51 THEN F=50: L=1: GOTO 21 ELSE IF F/2=INT(F/2) THEN PRINT ".";
18 IF PEEK(E)<>32 THEN A(F)=A(F)+CHR$(PEEK(E)): E=E+1: GOTO 18
19 IF PEEK(E)=32 THEN E=E+1: G=G+1: IF G<20 THEN 19
20 IF G<20 THEN G=0: GOTO 17
21 PRINT: PRINT "  Sorting the Menu  .............": K%=F: CMD"O",K%,A(1): CLS
22  FOR H=1 TO F: GOSUB 9: PRINT B ") " A(H),: NEXT: PRINT: IF L THEN 29
23 PRINT "  Press <0> to restart 'MENU', <ENTER> to quit, "
```

Cont'd on next page.

```
24 PRINT "  or any assigned <key)> to run the program: ";: PRINT OE;
25 GOSUB 4: PRINT C "; ";: D=ASC(C): GOSUB 6: I=D: IF I=0 THEN RUN
26 A1=MID$(A(I),(INSTR(A(I),"/")+1),3): IF A1="CMD" THEN CLS: CMD"I",A(I)
27 IF A1<>"BLD" AND A1<>"DAT" AND A1<>"TXT" THEN CLS: CMD"B","ON": RUN A(I)
28 PRINT: PRINT "* " A(I) " is not a program ! *": A1="": GOTO 23
29 PRINT "* I can only read 50 Filenames! This disk contains more! *": GOTO 23
30 IF ERL=140 THEN RESUME 12
31 IF ERR=128 THEN PRINT: PRINT "* No such program on this disk ! *": RESUME 23
32 CLS: PRINT "Error" ERR/2+1 "in line" ERL "; <BREAK> is activated."
33 PRINT: LIST .: END
34 PRINT OF: CLS: PRINT @135, "<E>nd in BASIC, or e<X>it to DOS ? ";
35 PRINT OE;: GOSUB 4: IF C<>"E" AND C<>"X" THEN 35 ELSE CLS: CMD"B","ON"
36 IF C="E" THEN END ELSE CMD"S"
```

MENU4/BAS PROGRAM LISTING NUMBER FOUR by Henry H. Herrdegen

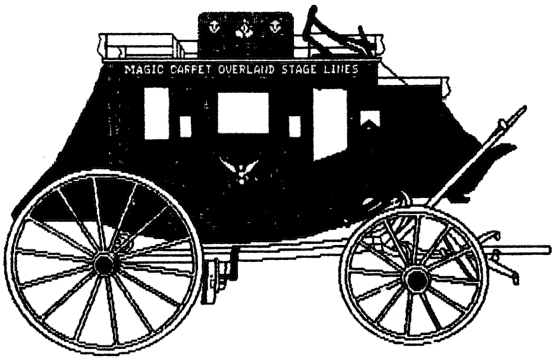
```
1  '"MENU4/BAS" (original AUTOMENU for TRSDOS 1.3, by Alan Shoemaker, P.D.),
changed for LS-DOS by Henry H. Herrdegen, (94 04 01)
2  CLS: CLEAR,63478!: DEFSTR A-C: DEFINT D-L: DIM A(62): ON ERROR GOTO 36
3  POKE 124,PEEK(124) OR 16: POKE 120,134: OUT 132,134: GOTO 12
4  POKE 124,PEEK(124) AND 239: POKE 120,135: OUT 132,135: RETURN
5  C=INKEY$: IF C="" THEN 5 ELSE IF C=CHR$(13) THEN 41: RETURN ELSE RETURN
6  IF D=>48 AND D<=57 THEN D=D-48: RETURN
7  IF D=>65 AND D<=90 THEN D=D-55: RETURN
8  IF D=>97 AND D<=122 THEN D=D-61: RETURN
9  IF H<10 THEN B=RIGHT$(STR$(H),1): RETURN
10 IF H<36 THEN B=CHR$(H+55): RETURN
11 B=CHR$(H+61): RETURN
12 PRINT @420, "Which disk drive number? ";: PRINT CHR$(14);: S=0: R=0: I=1
13 GOSUB 5: D=ASC(C)
14 IF ASC(C)<48 OR ASC(C)>51 THEN 12 ELSE PRINT C;: PRINT CHR$(15);: CLS
15 SYSTEM "CAT :"+C: PRINT CHR$(15);: IF PEEK(63498!)=91 THEN 12
16 IF PEEK(63648!)=32 THEN PRINT: GOTO 27 ELSE PRINT " Creating the Menu";
17 E=PEEK(63648!+S+R): IF E<>32 THEN A(I)=A(I)+CHR$(E): S=S+1: GOTO 17
18 IF E=32 AND S=0 AND PEEK(63648!+R+4)=32 THEN 22
19 IF E=32 THEN IF PEEK(63648!+R)=32 THEN R=R+4: I=I-1 ELSE R=R+19: PRINT ".";
20 A(I)=A(I)+STRING$(17-LEN(A(I)),32): I=I+1: S=0
21 IF I=>62 THEN M=1 ELSE 17
22 PRINT: PRINT " Sorting the Menu ";
23  FOR L=1 TO I-2: FOR K=L+1 TO I-1: IF A(L)>A(K) THEN SWAP A(L),A(K)
24  NEXT K: PRINT ".";: NEXT L: CLS
25  FOR H=1 TO I-1: GOSUB 9: PRINT B ") " A(H);: NEXT: PRINT
26 IF M THEN M=0: PRINT: GOTO 35
27 PRINT "     Press <0> to restart 'MENU', <ENTER> to quit, "
28 PRINT "     or any assigned <key)> to run the program: ";: PRINT CHR$(14);
29 GOSUB 5: PRINT C "; ";: D=ASC(C): GOSUB 6: I=D: IF I=0 THEN RUN
30 A1=MID$(A(I),(INSTR(A(I),"/")+1),3)
31 IF A1="CMD" THEN A1=LEFT$(A(I),INSTR(A(I),"/")-1): GOSUB 4: SYSTEM"RUN "+A1$
32 IF A1="JCL" OR A1="DAT" OR A1="TXT" OR LEFT$(A1,2)="OV" THEN 34
33 RUN A(I)
34 PRINT: PRINT "* " A(I) " is not a program ! *": A1="": GOTO 27
```

Cont'd on next page.

```
35 PRINT "  * I can read only 61 Filenames! This disk contains more! *": GOTO 27
36 IF ERL=15 THEN RESUME 12
37 IF ERR=64 THEN PRINT: PRINT "* No such program on this disk ! *": RESUME 27
38 CLS: PRINT "Error " ERR " in line " ERL ", <BREAK> active for investigation."
39 POKE 124,PEEK(124) AND 239: PRINT "* High Mem and Video RAM not reset! *"
40 PRINT: LIST .: END
41 CLS: PRINT @420, "<E>nd in BASIC, or e<X>it to DOS ? ";
42 GOSUB 5: IF C<>"E" AND C<>"X" THEN 42 ELSE CLS: GOSUB 4
43 IF C="E" THEN CLEAR,65535!: END ELSE CLEAR,65535!: SYSTEM
```

ETERCAL/BAS PROGRAM LISTING NUMBER FIVE by Henry H. Herrdegen

```
0  "ETERnal CALendar' from Basic Programming. (for twentieth century only.)
   Given the date, returns the day/week. Corrected, shortened, renumbered by:
   Henry H. Herrdegen. (94 04 03)
1  CLS: DIM M$(12), N(12)'                          *** initiate, set up arrays ***
2   FOR I=1 TO 12: READ M$(I),N(I)
3    DATA JANUARY,31,FEBRUARY,28,MARCH,31,APRIL,30,MAY,31,JUNE,30,JULY,31
4    DATA AUGUST,31,SEPTEMBER,30,OCTOBER,31,NOVEMBER,30,DECEMBER,31
5   NEXT I
6   FOR I=0 TO 6: READ D$(I)
7    DATA SUNDAY,MONDAY,TUESDAY,WEDNESDAY,THURSDAY,FRIDAY,SATURDAY
8   NEXT I
9  PRINT: M1$="": PRINT "    (19<01> to 20<00> only.):"'    *** program start ***
10 PRINT "    Enter: MTH, D, YY ";: INPUT M1$, D, Y: IF M1$="" THEN CLS: END
11  FOR M=1 TO 12: IF LEFT$(M1$,3)=LEFT$(M$(M),3) THEN 13 ELSE NEXT
12 PRINT " * No such Month! Enter 3 capital letters minimum!": GOTO 9
13 IF Y<=99 AND Y=INT(Y) AND D=INT(D) THEN 15
14 PRINT " * Input must be whole number, 1 or 2 digits !": GOTO 9
15 N(2)=28: IF Y=0 THEN Y=100'                  *** adjust for leap year and 2000 ***
16 IF Y/4=INT(Y/4) THEN N(2)=29
17 IF D>0 AND D=<N(M) THEN 19'                          *** check D for error ***
18 PRINT " * There is no such date!": GOTO 9
19 X=365*Y+INT((Y-1)/4)'       *** calculate days since Dec 31 1899, a sunday ***
20 IF Y=INT(Y/4) AND M>2 THEN X=X-1
21  FOR I=0 TO M-1: X=X+N(I): NEXT: X=X+D
22 D1=X-7*INT(X/7)'                                     *** calculate day ***
23 PRINT "    That date is a "; D$(D1): GOTO 9
```



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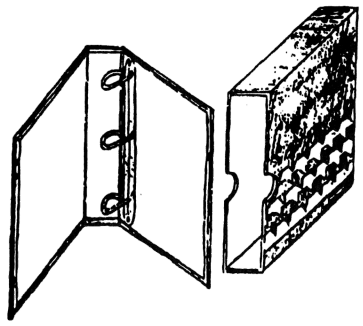

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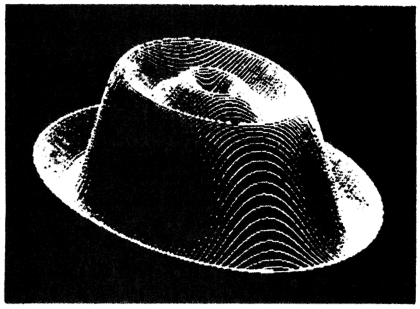

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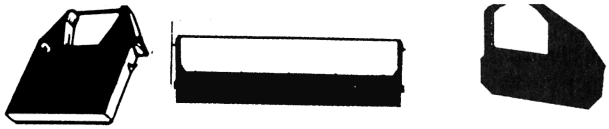

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By Jeff Vavasour

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MODEL 4 HIGH RESOLUTION	$ 2.00 (W)
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Enables hard two units to be connected to the I/O-Bus at the same time.

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MOUSE - PADS - HOLDERS - ADAPTERS

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MOUSE HOUSE HOLDER $ 1.75 (X)

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POWER SUPPLIES FOR MODEL 4/4P/4D OR MODEL III

ASTEC 65 WATT POWER SUPPLY $ 62.00 (Z)
For units that have only one supply.

ASTEC 38 WATT POWER SUPPLY $ 22.95 (Z)
For units that have two small supplies.

MODEL 4 HARDWARE

Non-gate array Motherboards 64K memory	$ 49.95 (Z)
Non-gate array Motherboards 128K memory	$ 70.90 (Z)
Sound Board Kits	$ 10.00 (Y)

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Cooling Fans 12 vdc used.	$ 6.00 (Y)
Internal 300 Baud Modems used.	$ 20.00 (Z)

All hardware is new and has never been installed unless otherwise noted.

FLAT RIBBON CABLE

25 Conductor	$ .38 ft.(Z)
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70-010 34 Pin 17x2 Header Male w/mtg	$ 7.50 (X)
70-011 25 Pin DB25 (RS232) Mail Plug	$ 3.00 (X)
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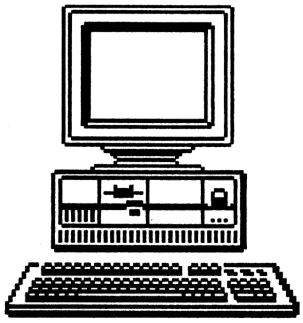
Printer	Radio Shack Cat. Number	CN80 Number	Type	Price Each for One	6 or More
LP I, II, IV	26-1413	CN1001	FABRIC REFILL	5.55	5.05
LP III, V	26-1414	CN1002	FABRIC CART.	6.38	5.88
LP III, V	26-1414	CN1003	FABRIC REFILL	4.79	4.29
LP VI/VIII,DMP 400/420	26-1418	CN1004	FABRIC CART.	5.60	5.10
LP VII, DMP 100	26-1424	CN1038	FABRIC CART.	6.00	4.50
DMP 110	26-1283	CN1005	FABRIC CART.	6.58	6.08
DMP130/130A/132/133/107	26-1236	CN1006	FABRIC CART.	6.40	5.90
DMP130/130A/132/133/107	26-1238	CN1007	FABRIC REFILL	5.00	4.50
DMP 500	26-1482	CN1008	FABRIC CART.	13.40	12.90
DMP 500	26-1482	CN1043	FABRIC REFILL	5.30	4.80
DMP 120, 200	26-1483	CN1009	FABRIC CART.	7.00	6.50
DMP 120, 200	26-1489	CN1010	FABRIC REFILL	4.85	4.35
DMP 430	26-1296	CN1013	FABRIC CART.	12.25	11.75
DMP 430	26-1296	CN1044	FABRIC REFILL	5.60	5.10
DMP 440	26-2809	CN1014	FABRIC CART.	19.30	18.80
DMP 2100, 2100P, 2110	26-1442	CN1015	FABRIC CART.	6.10	5.60
DMP 2100, 2100P, 2110	26-1442	CN1016	FABRIC REFILL	4.85	4.35
DMP 2120	26-2834	CN1017	FABRIC CART.	13.05	13.05
DMP 2120	26-2836	CN1018	FABRIC REFILL	7.90	7.40
LMP 2150	26-1287	CN1019	FABRIC CART.	8.00	7.50
DWP II, DWP 410/510	26-1419	CN1020	MULTI-STRIKE CT.	5.35	4.85
DWP II, DWP 410/510	26-1419	CN1021	M-S REFILL	4.50	4.00
DWP II, DWP 410/510	26-1449	CN1022	FABRIC CART.	6.55	5.95
DWP II, DWP 410/510	26-1449	CN1023	FABRIC REFILL	5.45	4.95
DWP 520, 230, 210	26-1445	CN1024	MULTI-STRIKE CT.	5.15	4.65
DWP 520, 230, 210	26-1445	CN1025	M-S REFILL	4.50	4.00
DWP 520, 230, 210	26-1458	CN1026	FABRIC CART.	5.60	5.10
DWP 520, 230, 210	26-1458	CN1027	FABRIC REFILL	4.80	4.30
DWP 220	26-1299	CN1028	MULTI-STRIKE CT.	7.95	7.45
DMP 300/2102	26-2819	CN1030	FABRIC CART.	7.15	6.65
DMP 300/2102	26-2819	CN1031	LONG LIFE CART.	6.85	6.35
ALPS ASP-1000	900-2326	CN1032	FABRIC CART.	6.60	6.10
EPSON FX/MX/RX-80	900-2327	CN1033	FABRIC CART.	5.50	5.00
EPSON LX/80/90	900-2328	CN1034	FABRIC CART.	5.00	4.50
PANASONIC KXP1090	900-2331	CN1035	FABRIC CART.	6.10	5.60
PANASONIC KXP1090	900-2331	CN1036	LONG LIFE CART.	7.35	6.85
STAR MICRON. NX1000	900-2332	CN1037	FABRIC CART.	6.45	5.95
PANASONIC KXP1180/1190/1191		CN1039	FABRIC CART.	6.90	6.40
PANASONIC KXP1180/1190/1191		CN1040	LONG LIFE CART.	7.60	7.10
SEIKOSHA SP-2000, 2400, SL-70		CN1041	FABRIC CART.	6.40	5.90
SEIKOSHA SL-90		CN1046	FABRIC CART.	7.25	6.75
SEIKOSHA SL-270		CN1047	FABRIC CART.	15.40	13.86

ALL RIBBONS ARE BLACK, CART.= Plastic Cartridge, REFILL= Refills Only/No Cartridge.

Add for Shipping and Handling

1 to five items add (Y) ... 6 or more items add (Z)
Please refer to the CN80 Product Guide Shipping and Handling Schedule.

Some ribbons for the older Radio Shack printers are not stocked, but are still available by special order, please allow an additional week shipping time. All stock ribbons are shipped within 24 hours from the time the order is received. C.O.D. orders accepted. Government and educational institution purchase orders are accepted. Sorry, we do not accept credit card orders.



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